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10/680,674	10/07/2003	Byung-Ook Son	LEPA121758	5441

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EXAMINER	
EGAN, SCOTT T	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/680,674	SON ET AL.	
	Examiner	Art Unit	
	Scott Egan	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7,8,15,16,24,25,33 and 34* is/are allowed.

6)☒ Claim(s) *1-5,9-13,17-22 and 26-31* is/are rejected.

7)☒ Claim(s) *6,14,23 and 32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

a. Page 10, line 22, referenced safety device 18 and stopper 19 do not match the drawings; they should be changed to 13 and 12-1 respectively.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5 and 13, 9, 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al. (US 5,502,598).

Consider **claim 1**, Kimura et al. explicitly teach:

A camera rotation drive module (fig 32), comprising:

an external command button arranged (hand tremor compensation on/off switch 33) on an external casing of a mobile terminal (column 13, lines 39-48);

a motor unit mounted in the mobile terminal (fig 13, motors 6 and 10) and driven by allowing the external command button to be pushed to rotate a lens tube (fig 1, lens

frame 2) (column14, lines 1-26 describe how the switch is checked and then the motors are controlled based on the position of the switch);

a camera unit comprised of the lens tube (fig 1, lens barrel 2a), a lens (fig 1, lens array 1), a sensor (fig 10, Hall element 27a and 27b) and a camera casing (fig 32) and mounted in the mobile terminal (fig 32); and

a control unit (hand tremor compensation control unit 30) for stopping the motor unit in response to an output value of the sensor (column 14, lines 19-26);

wherein the lens is mounted on the lens tube, and the sensor is arranged at a position where the sensor can sense at least one projection formed on the lens tube when the lens is located at a predetermined position (fig 10 shows the lens mounted on the tube and several projections from the tube 3b and 26a and 26b, the latter two being sensed by Hall elements 27a and 27b).

Consider **claim 2**, Kimura et al. explicitly teach:

The camera rotation drive module according to Claim 1, wherein the motor unit is driven after a user pushes the external command button and then a predetermined time Δt has elapsed (column 14, lines 11-26 demonstrate that when the switch is on the sensors determine the position of rotation, which takes time to complete, then the motors are controlled).

Consider **claim 4**, Kimura et al. explicitly teach:

The camera rotation drive module according to Claim 1, wherein the sensor is a hall Integrated Circuit (IC) (Hall elements 27a and 27b), and the projection is a magnetic substance (magnets 26a and 26b).

Consider **claim 5**, Kimura et al explicitly teach:

The camera rotation drive module according to Claim 1, further comprising a stopper attached to the camera casing (fig, 11-12B, locking member 28) and a stopper attached to the projection (fig, 11-12B, projection 3b is interpreted to be a stopper in that it stops the mechanism locking it in place, column 13, lines 24-30).

Consider **claim 9**, Kimura et al. explicitly teach:

A camera rotation drive module (fig 32), comprising:

an external command button arranged (hand tremor compensation on/off switch 33) on an external casing of a mobile terminal (column 13, lines 39-48);

a motor unit mounted in the mobile terminal (fig 13, motors 6 and 10) and driven by allowing the external command button to be pushed to rotate a lens tube (fig 1, lens frame 2) (column14, lines 1-26 describe how the switch is checked and then the motors are controlled based on the position of the switch);

a camera unit comprised of the lens tube (fig 1, lens barrel 2a), a lens (fig 1, lens array 1), two sensors (fig 10, Hall element 27a and 27b) and a camera casing (fig 32) and mounted in the mobile terminal (fig 32); and

a control unit (hand tremor compensation control unit 30) for stopping the motor unit in response to output values of the sensors (column 14, lines 19-26);

wherein the lens is mounted on the lens tube, and the sensors are arranged at positions where the sensors can sense at least one projection formed on the lens tube when the lens is located at a predetermined position (fig 10 shows the lens mounted on

the tube and the projections from the tube 26a and 26b which are sensed by Hall elements 27a and 27b).

Consider **claim 10**, Kimura et al. explicitly teach:

The camera rotation drive module according to Claim 9, wherein the motor unit is driven after a user pushes the external command button and then a predetermined time Δt has elapsed (column 14, lines 11-26 demonstrate that when the switch is on the sensors determine the position of rotation, which takes time to complete, then the motors are controlled).

Consider **claim 12**, Kimura et al explicitly teach:

The camera rotation drive module according to Claim 9, wherein the sensors are hall ICs (Hall elements 27a and 27b), and the projection is a magnetic substance (magnets 26a and 26b).

Consider **claim 13**, Kimura et al. explicitly teach:

The camera rotation drive module according to Claim 9; further comprising a stopper attached to the camera casing (fig, 11-12B, locking member 28), another projection attached to the lens tube, and a stopper attached to the projection (fig, 11-12B, projection 3b is interpreted to be a stopper in that it stops the mechanism locking it in place, column 13, lines 24-30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 3 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. in view of Patel et al. (US 6,894,724).

Consider **claim 3**, Kimura et al. explicitly teach the camera rotation drive module according to claim 1.

However, Kimura et al. do not explicitly teach that the sensors are push switches.

In the same field of endeavor, Patel et al. teach a camera that is rotated by a motor, whose direction can be stopped and rotated in the opposite direction (column 6-7, lines 55-67 and 1-6 respectively). Patel et al. further teach that sensors for stopping and rotating the camera in the opposite direction can be mechanical switches (columns 1-2 lines 57-67 and 1-7 respectively).

Therefore, it would have been obvious to one of ordinary skill in the art to include the mechanical switches found in Patel et al. into the sensors found in the camera taught in Kimura et al. in order to set limits of a scanning area of a camera (column 1, lines 47-56).

Consider **claim 11**, Kimura et al. explicitly teach the camera rotation drive module according to claim 9.

However, Kimura et al. do not explicitly teach that the sensors are push switches.

In the same field of endeavor, Patel et al. teach a camera that is rotated by a motor, whose direction can be stopped and rotated in the opposite direction (column 6-7, lines 55-67 and 1-6 respectively). Patel et al. further teach that sensors for stopping and rotating the camera in the opposite direction can be mechanical switches (columns 1-2 lines 57-67 and 1-7 respectively).

Therefore, it would have been obvious to one of ordinary skill in the art to include the mechanical switches found in Patel et al. into the sensors found in the camera taught in Kimura et al. in order to set limits of a scanning area of a camera (column 1, lines 47-56).

6. **Claims 17-20 and 26-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saari et al. in view of Patel et al. and further in view of Kim et al.

Consider **claim 17**, Saari et al. explicitly teaches:

A camera rotation drive module (fig 1), comprising:

two external command buttons arranged on an external casing of a mobile terminal (figure 1 shows that there are multiple buttons on the external housing 12);

a motor unit mounted in the mobile terminal (column 4, lines 38-41 explain how the lens barrel can be moved by a motor) and driven by allowing one of the external command buttons to be pushed to rotate a lens tube;

a camera unit comprised of the lens tube (lens portion 32), a lens (lens portion 32), a sensor and a camera casing (camera body 34) and mounted in the mobile terminal (figure 1);

However, Saari et al. do not explicitly teach that the lens tube has a sensor, a control unit to stop the motor in response to the sensor, or a projection on the lens tube that can be sensed by the sensor.

In the same field of endeavor, Patel et al. teach a camera that is rotated by a motor, whose direction can be stopped and rotated in the opposite direction. Patel et al. further teach that the cameras casing in our case the lens barrel has magnetically sensitive contacts 29 that come into contact with an actuator or stop 31 outside of the lens barrel which stop the rotation and can start rotation in the other direction (column 6-7, lines 55-67 and 1-6 respectively).

Therefore, it would have been obvious to one of ordinary skill in the art to include the properties of the motor and properties of the camera casing, specifically the sensors, found in Patel et al. into the mobile terminal found in Saari et al. in order to provide a flexibly adjustable scanning range to the camera (column2, lines 33-34).

The combination of Saari et al. in view of Patel et al. does not explicitly teach the use of the push buttons to start the rotation of the motor and lens tube.

In the same field of endeavor, Kim et al. teach a mobile communication unit which can be automatically opened and closed. Kim et al. further teach that there are two buttons (fig 1A, 180) on the housing that are responsible for triggering the motor to

rotate in one direction and the other direction (fig 2 shows the key input 206 to the control unit 200 which send a signal to the motor drive unit 232).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the buttons that drive the motor found in Kim et al. into the mobile terminal found in the combination of Saari et al. in view of Patel et al. in order to automatically and more efficiently control the position of a sub-body of the device (paragraph [0008], lines 1-4)

Consider **claim 18**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. further teaches that the motor unit is driven after the user presses a button and a predetermined time passes (Fig 2 in Kim et al. shows the process of starting the motor, which begins with pressing the key input and then a time must pass in order for the control unit to command the motor drive unit).

Consider **claim 19**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. further teaches that a first one of the two external command buttons generates a signal for causing the lens to face a user (Kim et al. teaches that the first button causes the motor to rotate in a first direction open of open/close switch 180), and a second one thereof generates a signal for causing the lens to face a direction away from the user (Kim et al. teaches that the first button causes the motor to rotate in the opposite direction close of open/close switch 180) (Saari et al. teach that the lens barrel can be rotated towards and away from the user Fig 2 and Fig 3 column 5, lines 27-48).

Consider **claim 20**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. further teaches that the sensor is a push switch (column 1, lines 61-67).

Consider **claim 26**, Saari et al. explicitly teaches:

A camera rotation drive module (fig 1), comprising:

two external command buttons arranged on an external casing of a mobile terminal (figure 1 shows that there are multiple buttons on the external housing 12);

a motor unit mounted in the mobile terminal (column 4, lines 38-41 explain how the lens barrel can be moved by a motor) and driven by allowing one of the external command buttons to be pushed to rotate a lens tube;

a camera unit comprised of the lens tube (lens portion 32), a lens (lens portion 32), two sensors and a camera casing (camera body 34) and mounted in the mobile terminal (figure 1);

However, Saari et al. do not explicitly teach that the lens tube has two sensors, a control unit to stop the motor in response to the sensors, or a projection on the lens tube that can be sensed by the sensor.

In the same field of endeavor, Patel et al. teach a camera that is rotated by a motor, whose direction can be stopped and rotated in the opposite direction. Patel et al. further teach that the cameras casing in our case the lens barrel has magnetically sensitive contacts 29 that come into contact with an actuator or stop 31 outside of the lens barrel which stop the rotation and can start rotation in the other direction (column 6-7, lines 55-67 and 1-6 respectively).

Therefore, it would have been obvious to one of ordinary skill in the art to include the properties of the motor and properties of the camera casing, specifically the sensors, found in Patel et al. into the mobile terminal found in Saari et al. in order to provide a flexibly adjustable scanning range to the camera (column2, lines 33-34).

The combination of Saari et al. in view of Patel et al. does not explicitly teach the use of the push buttons to start the rotation of the motor and lens tube.

In the same field of endeavor, Kim et al. teach a mobile communication unit which can be automatically opened and closed. Kim et al. further teach that there are two buttons (fig 1A, 180) on the housing that are responsible for triggering the motor to rotate in one direction and the other direction (fig 2 shows the key input 206 to the control unit 200 which send a signal to the motor drive unit 232).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the buttons that drive the motor found in Kim et al. into the mobile terminal found in the combination of Saari et al. in view of Patel et al. in order to automatically and more efficiently control the position of a sub-body of the device (paragraph [0008], lines 1-4)

Consider **claim 27**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. further teaches that the motor unit is driven after the user presses a button and a predetermined time passes (Fig 2 in Kim et al. shows the process of starting the motor, which begins with pressing the key input and then a time must pass in order for the control unit to command the motor drive unit).

Consider **claim 28**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. further teaches that a first one of the two external command buttons causes the lens to face forward (Kim et al. teaches that the first button causes the motor to rotate in a first direction open of open/close switch 180), and a second one thereof causes the lens to face backward (Kim et al. teaches that the first button causes the motor to rotate in the opposite direction close of open/close switch 180) (Saari et al. teach that the lens barrel can be rotated towards and away from the user Fig 2 and Fig 3 column 5, lines 27-48).

Consider **claim 29**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. further teaches that the sensor is a push switch (column 1, lines 61-67).

7. **Claims 21 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saari et al. in view of Patel et al. in further view of Kim et al. as applied to claims 17 and 26 respectively above, and further in view of Kimura et al.

Consider **claim 21**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. teaches the camera rotation drive module according to claim 17.

However the combination does not explicitly teach that the sensor is a hall IC and the projections are a magnetic substance.

In the same field of endeavor Kimura et al. teach a lens frame supporting mechanism that rotates inside the casing. Kimura et al. further teach the use of hall elements as sensors 271 and 27b and that the projections on the lens tube are magnets 26a and 26b.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the hall elements and magnetic projections found in Kimura et al. into the camera found in the combination of Saari et al. in view of Patel et al. in further view of Kim et al. in order to realize a reduced load to the rotation actuator (column 2 lines 20-21).

Consider **claim 30**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. teaches the camera rotation drive module according to claim 26.

However the combination does not explicitly teach that the sensors are hall IC and the projections are a magnetic substance.

In the same field of endeavor Kimura et al. teach a lens frame supporting mechanism that rotates inside the casing. Kimura et al. further teach the use of hall elements as sensors 271 and 27b and that the projections on the lens tube are magnets 26a and 26b.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the hall elements and magnetic projections found in Kimura et al. into the camera found in the combination of Saari et al. in view of Patel et al. in further view of Kim et al. in order to realize a reduced load to the rotation actuator (column 2 lines 20-21).

8. **Claims 22 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saari et al. in view of Patel et al. in further view of Kim et al. as applied to claims 17 and 26 respectively above, and further in view of Kang (2002/0187818).

Consider **claim 22**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. teaches the camera rotation drive module according to claim 17.

However, the combination does not explicitly teach that there is stopper attached to a projection, which is attached to the lens tube, and another stopper attached to the camera casing.

In the same field of endeavor Kang teaches a portable phone with camera, including a camera module 30 which can rotate 360 degrees (paragraph [0029, lines 11-14). Kang further teaches in figure 6 that the camera casing or contacting part 41 includes stoppers in grooves 42a and the lens tube camera module 30 has projections that act as stoppers, protrusions 44a.

Therefore, it would have been obvious to one of ordinary skill in the art to include the stopper system found in Kang into the mobile terminal found in the combination of Saari et al. in view of Patel et al. in further view of Kim et al. in order to be able to set the camera in a user defined locked rotated position (paragraph [0039], lines 8-15).

Consider **claim 31**, the combination of Saari et al. in view of Patel et al. in further view of Kim et al. teaches the camera rotation drive module according to claim 26.

However, the combination does not explicitly teach that there is stopper attached to a projection, which is attached to the lens tube, and another stopper attached to the camera casing.

In the same field of endeavor Kang teaches a portable phone with camera, including a camera module 30 which can rotate 360 degrees (paragraph [0029, lines 11-14). Kang further teaches in figure 6 that the camera casing or contacting part 41

includes stoppers in grooves 42a and the lens tube camera module 30 has projections that act as stoppers, protrusions 44a.

Therefore, it would have been obvious to one of ordinary skill in the art to include the stopper system found in Kang into the mobile terminal found in the combination of Saari et al. in view of Patel et al. in further view of Kim et al. in order to be able to set the camera in a user defined locked rotated position (paragraph [0039], lines 8-15).

Allowable Subject Matter

9. **Claims 6, 14, 23, and 32** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose or make obvious a camera rotation drive module with a projection that is formed so that the arc angle of the projection is defined by the equation found in claims 6, 14, 23, and 32.

11. **Claims 7-8, 15-16, 24-25, 33-34** are allowed.

12. The following is an examiner's statement of reasons for allowance:

Consider claim 7, the prior art fails to disclose or make obvious a method of rotating a lens of a camera by setting a memory flag, pushing a button, checking the memory flag, driving the motor after a predetermined time depending on the setting of the flag, sensing a projection on a lens tube in order to stop the motor, inverting the flag in memory, and repeating the procedure upon another press of the button.

Consider claim 15, the prior art fails to disclose or make obvious a method of rotating a lens of a camera by pushing a button, checking the output of a sensor, driving the motor after a predetermined time depending on the output of the sensor, stopping the motor based on the output of the sensor, and repeating the procedure upon another press of the button.

Consider claim 24, the prior art fails to disclose or make obvious a method of rotating a lens of a camera by pushing one of two buttons, if one button is pushed rotating the camera in one direction after a predetermined time and when a sensor is low, sensing a projection on the lens tube to output a high sensed value, stopping the motor and waiting for another command. If the second button is pushed the motor does the same process but in the opposite direction.

Consider claim 33, the prior art fails to disclose or make obvious a method of rotating a lens of a camera by pushing one of two buttons, if one button is pushed rotating the camera in one direction after a predetermined time, sensing a projection on the lens tube to output a high sensed value with a forward sensor of two sensors, stopping the motor and waiting for another command. If the second button is pushed the motor does the same process but in the opposite direction with the second or backward sensor.

Claims 8, 16, 25, 34, are allowed due to their dependencies on claims 7, 15, 24, and 33 respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Siddoway et al. (US 6,473,631) discloses a portable video phone that gives the user the option of rotating the camera portion to any position between towards the user and away from the user.

b. Fisher (US 6,876,379) discloses a mobile communication unit that includes a lens tube that can rotate and sensor that can sense if the camera is in a protected state.

c. Bum (US 2003/0013417) disclose a mobile terminal with a rotatable display that is controlled by a motor, which is commanded by a button.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Egan whose telephone number is (571) 270-1452. The examiner can normally be reached on Monday-Friday 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SE

NGOC-YEN VU
SUPERVISORY PATENT EXAMINER